PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF MD202E AT BRIGHTSEAT PROPERTY/LANDOVER CROSSING SHOPPING CENTER SOUTH ACCESS IN PRINCE GEORGE'S COUNTY.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES. THERE WILL BE EXCLUSIVE LEFT TURN PHASES FOR BOTH THE NORTH AND SOUTHBOUND MOVEMENTS OF MD 202E. THE MD202E THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY. THE SITE ENTRANCES WILL OPERATE IN A SPLIT PHASE OPERATION WITH AN ACTUATED PEDESTRIAN MOVEMENT ACROSS THE SOUTH LEG OF THE INTERSECTION. A CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION.

DURING STADIUM EVENTS THE TRAFFIC SIGNAL SHALL GO TO FLASHING OPERATION MODE. THE FIBER-OPTIC SIGNS WILL CONTROL RESTRICTED IN/OUT LANE CLOSURSES WITH NO LEFT TURNS THROUGHOUT THE ENTIRE INTERSECTION ALONG WITH CONTROL FROM THE POLICE DEPARTMENT DURING BOTH PRE- EVENT AND POST EVENTS.
(SEE TRAFFIC SIGNAL PLAN FOR LANE RESTRICTION DURING PRE AND POST STADIUM EVENTS)

SPECIAL NOTES

1. THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MS. FELECIA MURPHY, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404
MR. DUANE BERNARD, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7336
MR. VERNON STINNETT, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 615-7304
MR. VICTOR GRAFTON, UTILITY ENGINEER
PHONE: (301) 513-7350
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. EDWARD RODENHIZER, SUPERVISOR, SIGNAL OPERATIONS
PHONE: (410) 787-7652

POWER COMPANY REPRESENTATIVE IS:
PEPCO
RICHARD CHILCOAT
FORESTVILLE SERVICE CENTER
8300 OLD MARLBORO PIKE
FORESTVILLE, MD 20772
(301) 967-5805
WMS# 3357957

2. APS WILL FUNCTION AS FOLLOWS:
   FOR BRIGHTSEAT ROAD AT BRIGHT SEAT PROPERTY
   A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS BRIGHTSEAT AT BRIGHTSEAT ACCESS. WAIT"
   B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

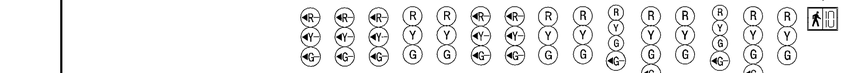
   FOR BRIGHTSEAT ROAD AT SHOPPING CENTER
   A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS BRIGHTSEAT AT LANDOVER CROSSING SHOPPING CENTER. WAIT"
   B. WHEN WALK PHASE BEGINS, THE AUDIBLE SOUND WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

3. THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT 410-787-7635 TO ARRANGE FOR THE PHONE DROP INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET NUMBER, ZIP CODE, AND TELEPHONE NUMBER.

GENERAL NOTES

1. VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
2. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
3. PAVEMENT MARKINGS DETAILED ARE PROPOSED AND ARE TO BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH MD-SHA STANDARDS(SEE SIGNING AND MARKING PLAN). ALL OTHER PAVEMENT MARKINGS ARE TO BE CONSIDERED AS EXISTING.
4. GEOMETRICS SHALL BE CONFIRMED PRIOR TO THE INSTALLATION OF SIGNAL EQUIPMENT. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
5. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY.
6. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18 IN. FROM A 60 IN. x 60 IN. LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
7. THE 10 FT. SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
8. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
9. THE LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 & FIG 4E-2 AND THE NCHRP PUBLICATION. "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
10. ALL UNUSED CABLE SHALL BE REMOVED.

PHASE CHART



PHASE 1 AND 5	←G–	←G–	←G–	R	R	←G–	←G–	R	R	R	R	R	R	R	DW	
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																
PHASE 1 AND 6	←G–	←G–	←G–	G	G	←R–	←R–	R	R	R	R	R	R	R	DW	
1 CHANGE	←Y–	←Y–	←Y–	G	G	←R–	←R–	R	R	R	R	R	R	R	DW	
PHASE 2 AND 5	←R–	←R–	←R–	R	R	←G–	←G–	G	G	R	R	R	R	R	DW	
5 CHANGE	←R–	←R–	←R–	R	R	←Y–	←Y–	G	G	R	R	R	R	R	DW	
PHASE 2 AND 6	←R–	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	DW	
2 AND 6 CHANGE	←R–	←R–	←R–	Y	Y	←R–	←R–	Y	Y	R	R	R	R	R	DW	
PHASE 3	←R–	←R–	←R–	R	R	←R–	←R–	R	R	R	R	G ←G–	G ←G–	G	DW	
3 CHANGE	←R–	←R–	←R–	R	R	←R–	←R–	R	R	R	R	Y	Y	Y	DW	
PHASE 4	←R–	←R–	←R–	R	R	←R–	←R–	R	R	G ←G–	G ←G–	G	R	R	R	DW
4 CHANGE	←R–	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	R	R	R	DW
PHASE 4 ALT	←R–	←R–	←R–	R	R	←R–	←R–	R	R	G ←G–	G ←G–	G	R	R	R	WK
PED CLEARANCE	←R–	←R–	←R–	R	R	←R–	←R–	R	R	G ←G–	G ←G–	G	R	R	R	FL/DW
4 ALT CHANGE	←R–	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	R	R	R	DW
FLASHING OPERATION	FL/ ←R–	FL/ ←R–	FL/ ←R–	FL/Y	FL/Y	FL/ ←R–	FL/ ←R–	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK

SPECIAL OPERATION DURING STADIUM EVENTS	FL/ ←R–	FL/ ←R–	FL/ ←R–	FL/Y	FL/Y	FL/ ←R–	FL/ ←R–	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

NONE.

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNITS	DESCRIPTION
LS	LS	MAINTENANCE OF TRAFFIC
LS	LS	MOBILIZATION
1	EA	27 FT. STEEL MAST ARM POLE WITH 50 FT. MAST ARM
1	EA	27 FT. STEEL MAST ARM POLE WITH 60 FT. MAST ARM
2	EA	27 FT. STEEL MAST ARM POLE WITH 70 FT. MAST ARM
1	EA	10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY TRANSFORMER BASE.
3	EA	20 FT. LIGHTING ARM
2	EA	250W HPS LAMP AND LUMINARIES
1	EA	STANDARD S.H.A. TRAFFIC SIGNAL CONTROLLER, BASE MOUNTED NEMA 6 CABINET, TERRA ACCESS POINT,TERRA VIDEO DETECTION INTERFACE, TELEMETRY INTERFACE EQUIPMENT,AND TWO (2) FOUR-CHANNEL LOOP DETECTOR AMPLIFIERS
4	EA	TERRA VIDEO DETECTOR CAMERA
1000	LF	TERRA VIDEO DETECTOR CAMERA CABLE (NO 18 A.W.G.)
3	EA	MICROLOOP PROBE (SET OF 3) WITH 500 FT. LEAD-IN CABLE
3	EA	MICROLOOP PROBE (SET OF 3) WITH 1000 FT. LEAD-IN CABLE
2	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH PUSHBUTTON SIGN
1	EA	APS 2-WIRE CENTRAL CONTROL UNIT
7	EA	12 IN. 3-SECTION LED SIGNAL HEAD - MAST
5	EA	12 IN. 3-SECTION LED SIGNAL HEAD (RA,YA,GA) - MAST
2	EA	12 IN. 4-SECTION LED SIGNAL HEAD - MAST
2	EA	8 IN./ 12 IN. 4-SECTION LED SIGNAL HEAD - MAST
1	EA	16 IN. 1-SECTION, 1-WAY LED (COUNTDOWN) PEDESTRIAN SIGNAL HEAD - POLE
1	EA	16 IN. 1-SECTION, 1-WAY LED (COUNTDOWN) PEDESTRIAN SIGNAL HEAD - POST TOP
6	EA	30 IN. X 36 IN. (FIBER-OPTIC) REGULATORY SIGN - MAST ARM
2	EA	30 IN. X 36 IN. REGULATORY SIGN - MAST ARM
2	EA	48 IN. X 48 IN. W8-3 "NEW" SIGN - GROUND
2	EA	VAR. X 16 IN D-3(1) (DUAL FACED) SIGN - MAST
70	LF	4 IN. X 6 IN. WOOD SIGN SUPPORTS
4	CY	TEST PIT EXCAVATION
5	EA	HANDHOLE
35	EA	1-CONDUCTOR CABLE (NO. 8 AWG)
495	LF	2-CONDUCTOR TRAY CABLE (NO.12 AWG)
485	LF	2-CONDUCTOR CABLE (NO. 14 AWG)
2120	LF	5-CONDUCTOR CABLE (NO. 14 AWG)
2250	LF	7-CONDUCTOR CABLE (NO. 14 AWG)
1000	LF	FIBER-OPTIC TELEMETRY 6 STRANDED
450	LF	BARE COPPER GROUND WIRE (NO. 6 AWG) -STRANDED
10	LF	1 IN. LIQUID TIGHT FLEXIBLE CONDUIT FOR DETECTOR SLEEVE
180	LF	2 IN. PVC CONDUIT RIGID [SCHEDULE 80] - TRENCHED
505	LF	3 IN. PVC CONDUIT RIGID [SCHEDULE 80] - TRENCHED
90	LF	3 IN. PVC CONDUIT RIGID [SCHEDULE 80] - BORED
165	LF	4 IN. PVC CONDUIT RIGID [SCHEDULE 80] - TRENCHED
500	LF	4 IN. PVC CONDUIT RIGID [SCHEDULE 80] - PUSHED/BORED
19.95	CY	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT
7	EA	GROUND ROD - 3/4 IN. X 10 FT. LENGTH
1	EA	(EMBEDDED) METER SERVICE PEDESTAL FOR ELECTRICAL SERVICE (100 AMP)
700	LF	DISCONNECT, PULL BACK AND RE-ROUTE EXISTING CABLE
1	EA	REMOVE EXISTING GROUND MOUNTED SIGN
125	SF	REMOVE /REPLACE CONCRETE SIDEWALK
390	LF	12 IN. WIDE THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.
175	LF	24 IN. WIDE THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.

The Traffic Group, Inc.
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1-800-583-8411
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"Merging Innovation and Excellence"

KEY

A, B, C, D, E, F, G, H, J, K — 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

L, M, N, O, P, W, X, u — 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

Q, R, S, U, q, r, t — 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) - FIBER OPTIC SIGNS

Y, Z, t — 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)

a, b — 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) A.P.S.

c, d, e, g, h — MICRO-LOOP PROBES LEAD-IN CABLE

j, k, l, m — TERRA VIDEO DETECTION CABLE (NO.: 18 A.W.G.)

n — TELEPHONE DROP

o — POWER SERVICE UNDERGROUND (2) - 1 CONDUCTOR (NO. 8 AWG)

p — 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE

ML — MICRO-LOOP PROBES (set of 3)

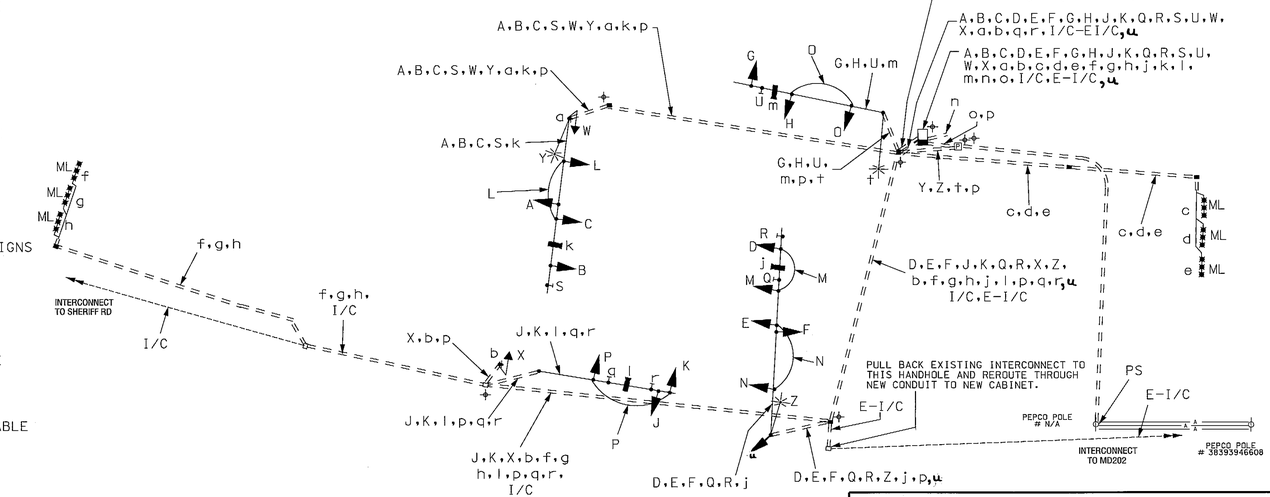
I/C — FIBEROPTIC TELEMETRY 6 STRANDED - FROM SHERIFF ROAD TO THE NEW CABINET AT THE ENTRANCE TO BRIGHTSEAT PROPERTY.

E-I/C — EXISTING -UNDERGROUND INTERCONNECT CABLE TO MD202

PS — POWER SERVICE UNDERGROUND

GROUND ROD

WIRING DIAGRAM



THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 1 YEAR FROM THE DATE OF APPROVAL. SHOULD CONSTRUCTION NOT BEGIN WITHIN THIS TIME FRAME THESE PLANS SHALL BE NULL AND VOID WITHOUT A REVIEW FROM THE TRAFFIC ENGINEERING DESIGN DIVISION.

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD202E AT BRIGHTSEAT PROPERTY

GENERAL INFORMATION PLAN

SCALE N.T.S. DATE JULY 25, 2011 CONTRACT NO. BW996M82

DESIGNED BY JOHN DIRNDORFER
DRAWN BY JOHN DIRNDORFER
CHECKED BY
F.A.P. NO. N/A
COUNTY PRINCE GEORGE'S
LOGMILE 16202E01.47
TIMS NO. I-917
TOD NO. N/A

TS NO. 4707-GI | DRAWING - OF | SHEET NO. 2 OF 2

PLOTTED: Tuesday, July 26, 2011 AT 09:23 AM
FILE: F:\2005\2005-0831\DES\SHA Approved TS——PM Plans\GI_MD202.dgn